

1 **FASTENING STRUCTURE OF THE COVER AND TOP SEAT OF**
2 **MAGAZINE OF A STAPING GUN NOSE**

3 **BACKGROUND OF THE INVENTION**

4 **1. Field of the Invention**

5 The present invention relates generally to stapling gun, and more
6 particularly to a structure for fastening a top cover and a top seat of magazine
7 of a stapling gun.

8 **2. Description of the Related Art**

9 The conventional stapling gun comprises a nose which is composed
10 of a top cover and a top seat. The top cover and the top seat are fastened
11 together by means of screws. When a staple is driven improperly by the
12 stapling gun such that the staple is deformed and stuck in the nose of the
13 stapling gun, the deformed staple must be removed by unfastening the top
14 cover from the top seat. The separation of the top cover from the top seat is
15 attained by unfastening the screws by which the top seat and the top cover are
16 fastened together. It is conceivable that the chore of unfastening and the
17 fastening the screws is time-consuming and inconvenient.

18 **SUMMARY OF THE INVENTION**

19 The primary objective of the present invention is to provide a
20 stapling gun with a structure for fastening the top cover and the top seat of a
21 magazine of the stapling gun such that the top seat and the top cover can be
22 unfastened with ease and speed.

1 It is another objective of the present invention to provide the stapling
2 gun a nose with a high strength fastening structure of the top seat and the top
3 cover of a magazine of the stapling gun. The fastening structure comprises a
4 plurality of retaining portions perpendicular to the direction of a driven staple,
5 thereby stabilizing the slot between the top seat and the top cover of the
6 magazine.

7 The features and the advantages of the present invention will be more
8 readily understood upon a thoughtful deliberation of the following detailed
9 description of the preferred embodiments of the present invention with
10 reference to the accompanying drawings.

11 **BRIEF DESCRIPTION OF THE DRAWINGS**

12 Fig. 1 shows an exploded view of a first preferred embodiment of the
13 present invention;

14 Fig. 2 shows a sectional schematic view of the first preferred
15 embodiment of the present invention in combination;

16 Fig. 3 shows a perspective view of the first preferred embodiment of
17 the present invention in combination;

18 Fig. 4 shows an exploded view of a second preferred embodiment of
19 the present invention; and

20 Fig. 5 shows a perspective view of the second preferred embodiment
21 of the present invention in combination.

1 **DETAILED DESCRIPTION OF THE INVENTION**

2 As shown in FIG. 1-3, a stapling gun 10 embodied in the present
3 invention comprises a top seat 20, a top cover 30, and a fastening latch 40 for
4 fastening the top seat 20 and the top cover 30, which are mounted on the
5 magazine 11 of the stapling gun.

6 The top seat 20 is provided with a fastening portion 21 and a staple
7 sliding slot 22. The top seat 20 is fastened with magazine by the fastener
8 portion 21 in conjunction with a plurality of fastening bolts. The staple sliding
9 slot 22 is used to allow movement of staple which is discharged by the stapling
10 gun 10.

11 The top cover 30 is provided with two pivoting lugs 31, each having
12 a pivoting hole 310. The top cover 30 is further provided with a support portion
13 32. The top cover 30 is mounted on the top seat 20 in conjunction with the
14 fastening latch 40 which is pivoted with the top cover 30. The fastening latch
15 40 comprises a moving member 41, a retaining ring 42, and a pivot 43. The
16 moving member 41 has a moving portion 410. The fastening latch 40 is
17 pivoted with the top cover 30 by means of the pivot 43 which is put through the
18 pivoting holes 310 of the top cover 30.

19 The present invention is characterized by the top seat 20 and the top
20 cover 30. The top seat 20 is provided with two retaining portions 23 opposite to
21 each other and having a retaining slot 230 perpendicular to the direction in
22 which the top cover 30 is pushed by driven staple. The top seat 20 is further

1 provided at one end with two fastening portions 24 opposite to each other, and
2 two fastening slots 240 in alignment with the retaining slots 230. The fastening
3 slots 240 are of an inclined construction. The retaining portions 23 are
4 provided at the top with a hooked portion 25 which is in turn provided with a
5 holding slot 250 opposite to the retaining slot 230 of the retaining portions 23
6 and the fastening slot 240 of the fastening portions 24. The top cover 30 is
7 provided with two retaining portions 33 corresponding to the retaining
8 portions 23 of the top seat 20. The top cover 30 is further provided with two
9 fastening portions 34 corresponding to the two fastening portions 24 of the top
10 seat 20. The fastening portions 34 are provided with a fastening edge 340
11 corresponding to the fastening slot 240 of the fastening portions 24 of the top
12 seat 20.

13 In combination, the top cover 30 is joined with the top seat 20 such
14 that the fastening edge 340 is held securely in the fastening slot 240 of the top
15 seat 20, and that the retaining portions 33 of the top cover 30 are retained in the
16 retaining slots 230 of the retaining portions 23 of the top seat 20. Meanwhile,
17 the retaining ring 42 of the fastening latch 40 is retained by the holding slot 250
18 of the hooked portions 25 of the top seat 20. The moving portion 410 of the
19 moving member 41 of the fastening latch 40 is supported by the support
20 portion 32 of the top cover 30, s shown in FIG.5.

21 When a staple is driven to move along the staple sliding slot 22 of the
22 top seat 20, the top cover 30 is exerted on by a pushing force perpendicular to

1 the top cover 30. The pushing force is overcome by the retaining portions 23 of
2 the top seat 20 and the retaining portions 33 of the top cover 30 thereby
3 preventing the top cover 30 from moving away from the top seat 20. As a result,
4 the driven staple is effectively confined by the top cover 30 and top seat 20 at
5 the time when the driven staple is moving along the staple sliding slot 22 of the
6 top seat 20. The driven staple thus prevented from being deformed.

7 As shown in FIG. 4, the top seat 20, the top cover 30, and the
8 fastening latch 40 of the second preferred embodiment of the present invention
9 are basically similar in construction to the counterparts of the first preferred
10 embodiment described above, except that the positions of the retaining
11 portions 23, the fastening portions 24, and the hooked portions 25 of the top
12 seat 20 of the former are changed. Accordingly, the positions of the retaining
13 portions 33, and the fastening portions 34 of the top cover 30 of the former are
14 changed correspondingly. In spite of such changes as described above, the
15 retaining mechanism of the present invention remains effective.

16 The embodiments of the present invention described above are to be
17 regarded in all respects as being illustrative and nonrestrictive. Accordingly,
18 the present invention may be embodied in other specific forms without
19 deviating from the spirit thereof. The present invention is therefore to be
20 limited only by the scopes of the following claims.